GenCore version 4.5


OM protein - protein search, using sw model

Run on: January 30, 2002, 11:48:21 ; Search time 53.29 Seconds
(without alignments)
18.070 Million cell updates/sec

Title: US-09-432-546-4
Perfect score: 99
Sequence: 1 RRWPWWPWKWPLI 13

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 522463 seqs, 74073290 residues

Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_1101:*
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21: /SIDS8/gcgdata/geneseq/geneseqp/AA2000.DAT:*
22: /SIDS8/gcgdata/geneseq/geneseqp/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | % Query Match | Length | DB | ID | Description |
|---|---|---|---|---|---|---|
| 1 | 99 | 100.0 | 13 | 21 | AAY92796 | Synthetic antimicr |
| 2 | 99 | 100.0 | 13 | 21 | AAY92806 | Antimicrobial pept |
| 3 | 99 | 100.0 | 14 | 21 | AAY92797 | Synthetic antimicr |
| 4 | 99 | 100.0 | 15 | 22 | AAB97449 | Peptide nucleic ac |
| 5 | 99 | 100.0 | 26 | 21 | AAY92798 | Synthetic antimicr |
| 6 | 99 | 100.0 | 68 | 21 | AAY92840 | Rev4-PR-1b fusion. |
| 7 | 78 | 78.8 | 14 | 18 | AAW13809 | Antimicrobial cati |
| 8 | 75 | 75.8 | 15 | 18 | AAW13801 | Antimicrobial cati |
| 9 | 73 | 73.7 | 11 | 22 | AAB97443 | Peptide nucleic ac |
| 10 | 73 | 73.7 | 13 | 16 | AAR78454 | Indolicidin analog |
| 11 | 73 | 73.7 | 13 | 19 | AAY24549 | Indolicidin analog |
| 12 | 73 | 73.7 | 13 | 21 | AAY91775 | Amino acid sequenc |
| 13 | 70.5 | 71.2 | 15 | 19 | AAW66360 | Indolicidin analog |
| 14 | 70.5 | 71.2 | 15 | 21 | AAY91784 | Amino acid sequenc |
| 15 | 70 | 70.7 | 12 | 19 | AAY24566 | Indolicidin analog |
| 16 | 70 | 70.7 | 12 | 19 | AAY24551 | Indolicidin analog |
| 17 | 70 | 70.7 | 12 | 21 | AAY91787 | Amino acid sequenc |
| 18 | 70 | 70.7 | 12 | 21 | AAY91792 | Amino acid sequenc |
| 19 | 70 | 70.7 | 13 | 18 | AAW12895 | Antimicrobial cati |
| 20 | 70 | 70.7 | 13 | 19 | AAY24607 | Indolicidin analog |
| 21 | 70 | 70.7 | 13 | 19 | AAY24565 | Indolicidin analog |
| 22 | 70 | 70.7 | 13 | 19 | AAW66375 | Cationic peptide o |
| 23 | 70 | 70.7 | 13 | 21 | AAY91786 | Amino acid sequenc |
| 24 | 70 | 70.7 | 13 | 21 | AAY91794 | Amino acid sequenc |
| 25 | 70 | 70.7 | 27 | 19 | AAW66363 | Indolicidin analog |
| 26 | 70 | 70.7 | 28 | 21 | AAY91800 | Amino acid sequenc |
| 27 | 69.5 | 70.2 | 16 | 18 | AAW12899 | Antimicrobial cati |
| 28 | 67.5 | 68.2 | 16 | 18 | AAW12882 | Antimicrobial cati |
| 29 | 67 | 67.7 | 11 | 19 | AAY24591 | Indolicidin analog |
| 30 | 67 | 67.7 | 11 | 21 | AAY91834 | Amino acid sequenc |
| 31 | 67 | 67.7 | 13 | 18 | AAW27179 | Antimicrobial cati |
| 32 | 67 | 67.7 | 13 | 18 | AAW12889 | Antimicrobial cati |
| 33 | 67 | 67.7 | 13 | 18 | AAW12894 | Indolicidin analog |
| 34 | 67 | 67.7 | 13 | 19 | AAY24610 | Amino acid sequenc |
| 35 | 67 | 67.7 | 13 | 21 | AAY91795 | Indolicidin analog |
| 36 | 67 | 67.7 | 20 | 19 | AAY24553 | Amino acid sequenc |
| 37 | 67 | 67.7 | 20 | 21 | AAY91797 | Poly-(Indol (1-13) |
| 38 | 67 | 67.7 | 63 | 21 | AAY44668 | Indolicidin fusion |
| 39 | 67 | 67.7 | 63 | 21 | AAY57142 | Indolicidin analog |
| 40 | 66 | 66.7 | 21 | 19 | AAY24582 | Amino acid sequenc |
| 41 | 66 | 66.7 | 21 | 21 | AAY91806 | Human EST encoded |
| 42 | 66 | 66.7 | 112 | 22 | AAM24343 | Antimicrobial cati |
| 43 | 65.5 | 66.2 | 15 | 18 | AAW12878 | Antimicrobial cati |
| 44 | 65.5 | 66.2 | 15 | 18 | AAW12880 | Indolicidin analog |
| 45 | 65 | 65.7 | 12 | 16 | AAR78456 | |

ALIGNMENTS

RESULT 1
AAY92796
ID AAY92796 standard; peptide; 13 AA.
XX
AC AAY92796;
XX
DT 29-AUG-2000 (first entry)
XX
DE Synthetic antimicrobial peptide, indolicidin reverse peptide, Rev4-amide.
XX
KW Magainin; antimicrobial; transgenic plant; protease degradation; Rev4;
KW indolicidin; protein production; reverse peptide.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 13
FT /note= "amidated"
FT
XX
PN WO200026344-A1.
XX
PD 11-MAY-2000.
XX
PF 29-OCT-1999; 99WO-US25561.
XX
PR 30-OCT-1998; 98US-0106373.
PR 02-NOV-1998; 98US-0106537.
XX
PA (INTE-) INTERLINK BIOTECHNOLOGIES LLC.
PA (KENT ) UNIV KENTUCKY RES FOUND.
XX
PI Everett NP, Li Q, Lawrence C, Davies MH;
XX
DR WPI; 2000-365597/31.

DR N-PSDB; AAA28510.
XX
PT Polypeptides for reducing proteolytic degradation of proteins
PT administered to, or produced by a plant comprise indolicin or its
PT functional equivalents
XX
PS Claim 28; Page 34; 50pp; English.
XX
CC Indolicidin is a potent antimicrobial tridecapeptide, originally
CC purified from cytoplasmic granules of bovine neutrophils. Reverse
CC peptide, Rev4 of indolicidin (see AAY92794) was found to have increased
CC stability against plant protease degradation. Expression of antimicrobial
CC peptides in transgenic plants suffers a major limitation in that the
CC foreign peptides are susceptible to rapid degradation by proteases. The
CC invention concerns reducing the extent of protease degradation of a
CC protein applied to, or produced by a plant by administering indolicidin,
CC Rev4 or a functional equivalent to the plant. Transgenic plants
CC expressing indolicidin and Rev4 are useful for production of the
CC antimicrobial peptides. Compositions containing indolicidin and Rev4 are
CC also useful for production of agronomically important proteins in
CC plants.
XX
SQ Sequence 13 AA;

Query Match 100.0%; Score 99; DB 21; Length 13;
Best Local Similarity 100.0%; Pred. No. 3.7e-07;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWKWPLI 13
||||||||||||||
Db 1 rrwpwwpwkwpli 13

RESULT 2
AAY92806
ID AAY92806 standard; peptide; 13 AA.
XX
AC AAY92806;
XX
DT 29-AUG-2000 (first entry)
XX
DE Antimicrobial peptide, indolicidin reverse peptide, Rev4.
XX
KW Magainin; antimicrobial; transgenic plant; protease degradation; Rev4;
KW indolicidin; protein production; reverse peptide.
XX
OS Synthetic.
XX
PN WO200026344-A1.
XX
PD 11-MAY-2000.
XX
PF 29-OCT-1999; 99WO-US25561.
XX
PR 30-OCT-1998; 98US-0106373.
PR 02-NOV-1998; 98US-0106537.
XX
PA (INTE-) INTERLINK BIOTECHNOLOGIES LLC.
PA (KENT ) UNIV KENTUCKY RES FOUND.
XX
PI Everett NP, Li Q, Lawrence C, Davies MH;
XX
DR WPI; 2000-365597/31.
DR N-PSDB; AAA28510.
XX
PT Polypeptides for reducing proteolytic degradation of proteins
PT administered to, or produced by a plant comprise indolicin or its
PT functional equivalents
XX
PS Claim 28; Page 35; 50pp; English.
XX
CC Indolicidin is a potent antimicrobial tridecapeptide, originally
CC purified from cytoplasmic granules of bovine neutrophils. Reverse
CC peptide, Rev4 of indolicidin (see AAY92794) was found to have increased
CC stability against plant protease degradation. Expression of antimicrobial
CC peptides in transgenic plants suffers a major limitation in that the
CC foreign peptides are susceptible to rapid degradation by proteases. The
CC invention concerns reducing the extent of protease degradation of a
CC protein applied to, or produced by a plant by administering indolicidin,
CC Rev4 or a functional equivalent to the plant. Transgenic plants
CC expressing indolicidin and Rev4 are useful for production of the
CC antimicrobial peptides. Compositions containing indolicidin and Rev4 are
CC also useful for production of agronomically important proteins in
CC plants.
XX
SQ Sequence 13 AA;

Query Match 100.0%; Score 99; DB 21; Length 13;
Best Local Similarity 100.0%; Pred. No. 3.7e-07;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWKWPLI 13
||||||||||||||
Db 1 rrwpwwpwkwpli 13

RESULT 3
AAY92797
ID AAY92797 standard; peptide; 14 AA.
XX
AC AAY92797;
XX
DT 29-AUG-2000 (first entry)
XX
DE Synthetic antimicrobial peptide, Ser-Rev4-OH.
XX
KW Magainin; antimicrobial; transgenic plant; protease degradation; Rev4;
KW indolicidin; protein production; reverse peptide.
XX
OS Synthetic.
XX
PN WO200026344-A1.
XX
PD 11-MAY-2000.
XX
PF 29-OCT-1999; 99WO-US25561.
XX
PR 30-OCT-1998; 98US-0106373.
PR 02-NOV-1998; 98US-0106537.
XX
PA (INTE-) INTERLINK BIOTECHNOLOGIES LLC.
PA (KENT ) UNIV KENTUCKY RES FOUND.
XX
PI Everett NP, Li Q, Lawrence C, Davies MH;
XX
DR WPI; 2000-365597/31.
XX
PT Polypeptides for reducing proteolytic degradation of proteins
PT administered to, or produced by a plant comprise indolicin or its
PT functional equivalents
XX
PS Claim 3; Page 34; 50pp; English.
XX
CC Indolicidin is a potent antimicrobial tridecapeptide, originally purified
CC from cytoplasmic granules of bovine neutrophils. A non C-terminal amide
CC analogue of Rev4 (reverse indolicidin) with an additional N-terminal Ser
CC was found to have increased stability against plant protease degradation
CC as well as potent antifungal activity. Expression of antimicrobial
CC peptides in transgenic plants suffers a major limitation in that the
CC foreign peptides are susceptible to rapid degradation by proteases. The
CC invention concerns reducing the extent of protease degradation of a
CC protein applied to, or produced by a plant by administering indolicidin,
CC Rev4 or a functional equivalent to the plant. Transgenic plants
CC expressing indolicidin and Rev4 are useful for production of the

CC antimicrobial peptides. Compositions containing indolicidin and Rev4 are
CC also useful for production of agronomically important proteins in plants.
XX
SQ Sequence 14 AA;

Query Match 100.0%; Score 99; DB 21; Length 14;
Best Local Similarity 100.0%; Pred. No. 4e-07;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWKWPLI 13
||||||||||||||
Db 2 rrwpwwpwkwpli 14

RESULT 4
AAB97449
ID AAB97449 standard; Protein; 15 AA.
XX
AC AAB97449;
XX
DT 31-JUL-2001 (first entry)
XX
DE Peptide nucleic acid peptide fragment #17.
XX
KW Peptide nucleic acid; PNA; antibiotic; antisense; enterococcus;
KW Staphylococcus aureus; Escherichia coli; infectious disease;
KW disinfectant; cationic peptide; linker.
XX
OS Synthetic.
XX
PN WO200127261-A2.
XX
PD 19-APR-2001.
XX
PF 13-OCT-2000; 2000WO-DK00580.
XX
PR 13-OCT-1999; 99DK-0001467.
PR 13-OCT-1999; 99DK-0001471.
PR 15-OCT-1999; 99US-0159679.
PR 15-OCT-1999; 99US-0159684.
PR 03-DEC-1999; 99DK-0001734.
PR 03-DEC-1999; 99DK-0001735.
PR 28-MAR-2000; 2000DK-0000522.
PR 19-APR-2000; 2000DK-0000670.
PR 19-APR-2000; 2000DK-0000671.
PR 14-JUN-2000; 2000US-0211435.
PR 14-JUN-2000; 2000US-0211758.
PR 14-JUN-2000; 2000US-0211878.
XX
PA (PANT-) PANTHECO AS.
XX
PI Nielsen PE, Good L, Hansen HF, Beck F, Malik L, Schou C;
PI Wissenbach M, Giwercman BK;
XX
DR WPI; 2001-273770/28.
XX
PT New modified peptide nucleic acids and oligonucleotides, useful for
PT treating and preventing bacterial infections and disinfecting
PT non-living objects -
XX
PS Claim 15; Page 11; 81pp; English.
XX
CC The present invention provides the sequences of a number of peptide
CC nucleic acids (PNAs) joined by linker sequences. These are capable of
CC crossing bacterial cell walls due to the presence of the linker. The PNAs
CC can be used as antimicrobial agents, particularly as antibiotics against
CC E. coli, vanomycin-resistant enterococci and Staphylococcus aureus. The
CC present sequence is the peptide fragment of a PNA of the invention.
XX
SQ Sequence 15 AA;

Query Match 100.0%; Score 99; DB 22; Length 15;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWKWPLI 13
||||||||||||||
Db 2 rrwpwwpwkwpli 14

RESULT 5
AAY92798
ID AAY92798 standard; peptide; 26 AA.
XX
AC AAY92798;
XX
DT 29-AUG-2000 (first entry)
XX
DE Synthetic antimicrobial peptide, Rev4-C-fusion.
XX
KW Magainin; antimicrobial; transgenic plant; protease degradation; Rev4;
KW indolicidin; protein production; reverse peptide.
XX
OS Synthetic.
XX
PN WO200026344-A1.
XX
PD 11-MAY-2000.
XX
PF 29-OCT-1999; 99WO-US25561.
XX
PR 30-OCT-1998; 98US-0106373.
PR 02-NOV-1998; 98US-0106537.
XX
PA (INTE-) INTERLINK BIOTECHNOLOGIES LLC.
PA (KENT ) UNIV KENTUCKY RES FOUND.
XX
PI Everett NP, Li Q, Lawrence C, Davies MH;
XX
DR WPI; 2000-365597/31.
XX
PT Polypeptides for reducing proteolytic degradation of proteins
PT administered to, or produced by a plant comprise indolicin or its
PT functional equivalents
XX
PS Claim 4; Page 34; 50pp; English.
XX
CC Indolicidin is a potent antimicrobial tridecapeptide, originally purified
CC from cytoplasmic granules of bovine neutrophils. Rev4 (reverse
CC indolicidin) with a C-terminal extension of 13 amino acids
CC was found to have increased stability against plant protease degradation
CC as well as potent antifungal activity. Expression of antimicrobial
CC peptides in transgenic plants suffers a major limitation in that the
CC foreign peptides are susceptible to rapid degradation by proteases. The
CC invention concerns reducing the extent of protease degradation of a
CC protein applied to, or produced by a plant by administering indolicidin,
CC Rev4 or a functional equivalent to the plant. Transgenic plants
CC expressing indolicidin and Rev4 are useful for production of the
CC antimicrobial peptides. Compositions containing indolicidin and Rev4 are
CC also useful for production of agronomically important proteins in plants.
XX
SQ Sequence 26 AA;

Query Match 100.0%; Score 99; DB 21; Length 26;
Best Local Similarity 100.0%; Pred. No. 7.5e-07;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWKWPLI 13
||||||||||||||
Db 1 rrwpwwpwkwpli 13

RESULT 6

```
AAY92840
ID   AAY92840 standard; Protein; 68 AA.
XX
AC   AAY92840;
XX
DT   29-AUG-2000  (first entry)
XX
DE   Rev4-PR-1b fusion.
XX
KW   Magainin; antimicrobial; transgenic plant; protease degradation; Rev4;
KW   indolicidin; protein production; reverse peptide; ss.
XX
OS   Synthetic.
XX
PN   WO200026344-A1.
XX
PD   11-MAY-2000.
XX
PF   29-OCT-1999;   99WO-US25561.
XX
PR   30-OCT-1998;   98US-0106373.
PR   02-NOV-1998;   98US-0106537.
XX
PA   (INTE-) INTERLINK BIOTECHNOLOGIES LLC.
PA   (KENT ) UNIV KENTUCKY RES FOUND.
XX
PI   Everett NP,  Li Q,  Lawrence C,  Davies MH;
XX
DR   WPI; 2000-365597/31.
DR   N-PSDB; AAA28519.
XX
PT   Polypeptides for reducing proteolytic degradation of proteins
PT   administered to, or produced by a plant comprise indolicin or its
PT   functional equivalents
XX
PS   Disclosure; Page 35-36; 50pp; English.
XX
CC   Indolicidin is a potent antimicrobial tridecapeptide, originally
CC   purified from cytoplasmic granules of bovine neutrophils.  Reverse
CC   peptide, Rev4 of indolicidin (see AAY92794) was found to have increased
CC   stability against plant protease degradation. Expression of antimicrobial
CC   peptides in transgenic plants suffers a major limitation in that the
CC   foreign peptides are susceptible to rapid degradation by proteases. The
CC   invention concerns reducing the extent of protease degradation of a
CC   protein applied to, or produced by a plant by administering indolicidin,
CC   Rev4 or a functional equivalent to the plant. Transgenic plants
CC   expressing indolicidin and Rev4 are useful for production of the
CC   antimicrobial peptides. Compositions containing indolicidin and Rev4 are
CC   also useful for production of agronomically important proteins in
CC   plants.
XX
SQ   Sequence   68 AA;


  Query Match             100.0%;  Score 99;  DB 21;  Length 68;
  Best Local Similarity   100.0%;  Pred. No. 2e-06;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RRWPWWPWKWPLI 13
           |||||||||||||
Db      56 rrwpwwpwkwpli 68


RESULT   7
AAW13809
ID   AAW13809 standard; peptide; 14 AA.
XX
AC   AAW13809;
XX
DT   10-DEC-1997  (first entry)
XX
DE   Antimicrobial cationic peptide CP-13.
XX
KW   Bacterial; viral; antitumour; food; preservative; inhibitor; growth;
KW   bacterium; yeast; endotoxaemia; sepsis; antibiotic; fungal;
KW   antiviral; Candida albicans; sterilant; Salmonella; Yersina;
KW   Shigella.
XX
OS   Synthetic.
XX
PN   WO9708199-A2.
XX
PD   06-MAR-1997.
XX
PF   23-AUG-1996;   96WO-IB00996.
XX
PR   23-AUG-1995;   95US-0002687.
XX
PA   (UYBR-) UNIV BRITISH COLUMBIA.
XX
PI   Falla TJ,  Gough M,  Hancock REW;
XX
DR   WPI; 1997-179179/16.
XX
PT   Cationic peptide(s) having anti-microbial activity - used for the
PT   inhibition of bacterial and viral growth, as an antitumour agent,
PT   and as a food preservative
XX
PS   Claim 8; Page 68; 89pp; English.
XX
CC   The present sequence represents a specifically claimed novel isolated
CC   cationic peptide which has antimicrobial activity. The amino acid
CC   sequence of antimicrobial cationic peptides (including the present
CC   sequence) is selected from: X1X1ProX2X3X2Pro(X2X2Pro)nX2X3(X5)o;
CC   X1X1ProX2X3X4(X5)rProX2X3X3; X1X1X3(ProTrp)uX3X2X5X2X2X5X2(X5)o;
CC   X1X1X3X3X2Pro(X2X2Pro)nX2(X5)m; where m = 1-5; n = 1-2; o = 2-5; r
CC   = 0-8; u = 0-1; X1 = Ile, Leu, Val, Phe, Tyr, Trp or Met; X2 = Trp or
CC   Phe; X3 = Arg or Lys; X4 = Trp or Lys; and X5 = Phe, Trp, Arg, Lys or
CC   Pro. The peptides are preferably amidated or carboxymethylated. The
CC   peptides may be used in methods for inhibiting the growth of a bacterium
CC   or yeast, or for inhibiting an endotoxaemia or sepsis associated
CC   disorder in a subject. The peptides have a broad activity against
CC   antibiotic resistant bacteria, combined with activity against the
CC   medically important fungus Candida albicans. In addition, the peptides
CC   are useful as antitumour agents and/or antiviral agents. The peptides
CC   may be used as sterilants or preservatives of materials susceptible to
CC   microbial or viral contamination, e.g. in processed foods to inhibit
CC   Salmonella, Yersina and Shigella. The peptides are compact and tend to
CC   have a unique polyproline type II extended helix structure that permits
CC   them to span the membrane with relatively few amino acids. The peptides
CC   possess the ability to work synergistically with antibiotics, and in
CC   addition, some of then possess anti-endotoxin activity.
XX
SQ   Sequence   14 AA;


  Query Match             78.8%;  Score 78;  DB 18;  Length 14;
  Best Local Similarity   80.0%;  Pred. No. 0.00021;
  Matches    8;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RRWPWWPWKW 10
           ::|||||||||
Db       3 kkwpwwpwkw 12


RESULT   8
AAW13801
ID   AAW13801 standard; peptide; 15 AA.
XX
AC   AAW13801;
XX
DT   10-DEC-1997  (first entry)
XX
DE   Antimicrobial cationic peptide CP-27.
XX
KW   Bacterial; viral; antitumour; food; preservative; inhibitor; growth;
```

KW bacterium; yeast; endotoxaemia; sepsis; antibiotic; fungal;
KW antiviral; Candida albicans; sterilant; Salmonella; Yersina;
KW Shigella.
XX
OS Synthetic.
XX
PN WO9708199-A2.
XX
PD 06-MAR-1997.
XX
PF 23-AUG-1996; 96WO-IB00996.
XX
PR 23-AUG-1995; 95US-0002687.
XX
PA (UYBR-) UNIV BRITISH COLUMBIA.
XX
PI Falla TJ, Gough M, Hancock REW;
XX
DR WPI; 1997-179179/16.
XX
PT Cationic peptide(s) having anti-microbial activity - used for the
PT inhibition of bacterial and viral growth, as an antitumour agent,
PT and as a food preservative
XX
PS Claim 3; Page 66; 89pp; English.
XX
CC The present sequence represents a specifically claimed novel isolated
CC cationic peptide which has antimicrobial activity. The amino acid
CC sequence of antimicrobial cationic peptides (including the present
CC sequence) is selected from: X1X1ProX2X3X2Pro(X2X2Pro)nX2X3(X5)o;
CC X1X1ProX2X3X4(X5)rProX2X3X3; X1X1X3(ProTrp)uX3X2X5X2X2X5X2(X5)o;
CC X1X1X3X3X2Pro(X2X2Pro)nX2(X5)m; where m = 1-5; n = 1-2; o = 2-5; r
CC = 0-8; u = 0-1; X1 = Ile, Leu, Val, Phe, Tyr, Trp or Met; X2 = Trp or
CC Phe; X3 = Arg or Lys; X4 = Trp or Lys; and X5 = Phe, Trp, Arg, Lys or
CC Pro. The peptides are preferably amidated or carboxymethylated. The
CC peptides may be used in methods for inhibiting the growth of a bacterium
CC or yeast, or for inhibiting an endotoxaemia or sepsis associated
CC disorder in a subject. The peptides have a broad activity against
CC antibiotic resistant bacteria, combined with activity against the
CC medically important fungus Candida albicans. In addition, the peptides
CC are useful as antitumour agents and/or antiviral agents. The peptides
CC may be used as sterilants or preservatives of materials susceptible to
CC microbial or viral contamination, e.g. in processed foods to inhibit
CC Salmonella, Yersina and Shigella. The peptides are compact and tend to
CC have a unique polyproline type II extended helix structure that permits
CC them to span the membrane with relatively few amino acids. The peptides
CC possess the ability to work synergistically with antibiotics, and in
CC addition, some of then possess anti-endotoxin activity.
XX
SQ Sequence 15 AA;

Query Match 75.8%; Score 75; DB 18; Length 15;
Best Local Similarity 70.0%; Pred. No. 0.00056;
Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWKW 10
::|||||:|
Db 3 kkwpwwpwrw 12

RESULT 9
AAB97443
ID AAB97443 standard; Protein; 11 AA.
XX
AC AAB97443;
XX
DT 31-JUL-2001 (first entry)
XX
DE Peptide nucleic acid peptide fragment #11.
XX
KW Peptide nucleic acid; PNA; antibiotic; antisense; enterococcus;
KW Staphylococcus aureus; Escherichia coli; infectious disease;
KW disinfectant; cationic peptide; linker.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 11
FT /label= OTHER
FT /note= "optionally linked to AAF89184 by Cys
FT -succinimidyl 4(N-maleimidomethyl)cyclohexane-1
FT -carboxylate-8-amino-3,6-dioxaoctanoic acid"
XX
PN WO200127261-A2.
XX
PD 19-APR-2001.
XX
PF 13-OCT-2000; 2000WO-DK00580.
XX
PR 13-OCT-1999; 99DK-0001467.
PR 13-OCT-1999; 99DK-0001471.
PR 15-OCT-1999; 99US-0159679.
PR 15-OCT-1999; 99US-0159684.
PR 03-DEC-1999; 99DK-0001734.
PR 03-DEC-1999; 99DK-0001735.
PR 28-MAR-2000; 2000DK-0000522.
PR 19-APR-2000; 2000DK-0000670.
PR 19-APR-2000; 2000DK-0000671.
PR 14-JUN-2000; 2000US-0211435.
PR 14-JUN-2000; 2000US-0211758.
PR 14-JUN-2000; 2000US-0211878.
XX
PA (PANT-) PANTHECO AS.
XX
PI Nielsen PE, Good L, Hansen HF, Beck F, Malik L, Schou C;
PI Wissenbach M, Giwercman BK;
XX
DR WPI; 2001-273770/28.
XX
PT New modified peptide nucleic acids and oligonucleotides, useful for
PT treating and preventing bacterial infections and disinfecting
PT non-living objects -
XX
PS Claim 16; Page 68; 81pp; English.
XX
CC The present invention provides the sequences of a number of peptide
CC nucleic acids (PNAs) joined by linker sequences. These are capable of
CC crossing bacterial cell walls due to the presence of the linker. The PNAs
CC can be used as antimicrobial agents, particularly as antibiotics against
CC E. coli, vanomycin-resistant enterococci and Staphylococcus aureus. The
CC present sequence is the peptide fragment of a PNA of the invention.
XX
SQ Sequence 11 AA;

Query Match 73.7%; Score 73; DB 22; Length 11;
Best Local Similarity 100.0%; Pred. No. 0.00074;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWK 9
|||||||||
Db 2 rrwpwwpwk 10

RESULT 10
AAR78454
ID AAR78454 standard; peptide; 13 AA.
XX
AC AAR78454;
XX
DT 25-MAR-1996 (first entry)
XX
DE Indolicidin analog #1.
XX
KW Indolicidin; microbicide; therapeutic agent; prophylactic;

```
KW   food preservative; disinfectant; medication; Gram positive bacteria;
KW   Gram negative bacteria; protozoa; yeast; fungi; viruses.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 13
FT                   /note= "Arg to Trp mutation, amidated"
XX
PN   WO9522338-A1.
XX
PD   24-AUG-1995.
XX
PF   10-FEB-1995;   95WO-US01895.
XX
PR   16-FEB-1994;   94US-0197205.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Selsted ME;
XX
DR   WPI; 1995-302552/39.
XX
PT   Analogues of the tryptophan-rich peptide indolicidin - exhibiting
PT   broad spectrum antimicrobial activity and selectivity without
PT   undesirable side effects
XX
PS   Claim 6; Page 27; 37pp; English.
XX
CC   The sequences represented by AAR78454-R78459 are indolicidin analogues.
CC   These analogues exhibit broad spectrum antimicrobial activity and have
CC   antimicrobial selectivity when compared to naturally occuring
CC   indolicidin.  The antimicrobial activity of these analogues can be
CC   altered by incorporation of D-form, chemically altered or synthetic
CC   amino acids.  These sequences can be incorporated into a pharmaceutical
CC   composition (e.g. as a liposome or non-liposome lipid complex carrier)
CC   for use in a microbicidal method.  These sequences are active against
CC   Gram positive and negative bacteria, protozoa, yeast, fungi and viruses.
CC   They can be used as therapeutic agents, prophylactics, food
CC   preservatives, disinfectants or medications.  These sequences are easily
CC   synthesised in an active and effective broad spectrum antimicrobial form
CC   with decreased undesirable side effects.  Compared to naturally occuring
CC   indolicidin, these analogues show increased antimicrobial and decreased
CC   haemolytic activity.  Peptide stability, and period of activity within
CC   the cell can be increased or decreased according to the incorporation of
CC   D- or L-form amino acids.
XX
SQ   Sequence   13 AA;


  Query Match             73.7%;  Score 73;  DB 16;  Length 13;
  Best Local Similarity   77.8%;  Pred. No. 0.00087;
  Matches    7;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       2 RWPWWPWKW 10
           :|||||||:|
Db       5 kwpwwpwrw 13


RESULT  11
AAY24549
ID   AAY24549 standard; peptide; 13 AA.
XX
AC   AAY24549;
XX
DT   18-AUG-1999  (first entry)
XX
DE   Indolicidin analogue #1.
XX
KW   Indolicidin; bacterial infection; photo-oxidised solubiliser;
KW   antimicrobial; antibiotic; antiarrythmic; surface disinfectant;
KW   additive; shampoo; soap; insecticide; herbicide; preservative;
KW   food; technical material.
XX
OS   Synthetic.
XX
PN   WO9807745-A2.
XX
PD   26-FEB-1998.
XX
PF   21-AUG-1997;   97WO-US14779.
XX
PR   13-JAN-1997;   97US-0034949.
PR   21-AUG-1996;   96US-0024754.
XX
PA   (MICR-) MICROLOGIX BIOTECH INC.
XX
PI   Erfle D,  Fraser JR,  Krieger TJ,  Taylor R,  West MH;
XX
DR   WPI; 1998-169090/15.
XX
PT   New indolicidin analogues with antimicrobial activity and related
PT   nucleic acid - vectors, transformed cells and antibodies, also
PT   conjugates with polyoxyalkylene glycol and fatty acid to reduce
PT   toxicity, useful therapeutically, as disinfectants etc.
XX
PS   Claim 11; Page 88; 129pp; English.
XX
CC   AAY24549 to AAY24615 represent indolicidin analogues of formulae
CC   (I)-(VIII) containing up to 25 amino acids (aa): RXZXXZXB (I), BXZXXZXB
CC   (II), BBBXZXXZXB  (III), BXZXXZXBBBn(AA)nMILBBAGS (IV), BXZXXZXBB(AA)nM
CC   (V), LBBnXZnXXZnXRK  (VI), LKnXZXXZXRRK  (VII) and BBXZXXZXBBB  (VIII).
CC   Where Z = P or V; X = hydrophobic residue, preferably W; B = basic aa,
CC   preferably R or K; AA = any aa; n = 0 or 1; in (II), at least 1 Z = V;
CC   in (VIII) at least 2 X = F or Y. The analogues are used to treat
CC   infections caused by bacteria (Gram positive or negative, or anaerobic);
CC   fungi (yeast or moulds); parasites (protozoa, nematodes, cestodes or
CC   trematodes) or viruses. Typical of very many pathogens that can be
CC   controlled are Leishmania, Trypanosoma, Ascaris lumbricoides, Fasciola
CC   hepatica, Klebsiella pneumoniae, Bordetella pertussis, Staphylococcus
CC   aureus, Listeria, Clostridium, rotavirus and papilloma virus. Compounds
CC   derived from the analogues may be used similarly; the compounds may
CC   also be prepared from antibiotics or antiarrythmic agents. The analogues
CC   may be used therapeutically or to coat medical devices; also they are
CC   useful as surface disinfectants, as additives to shampoo or soaps, as
CC   insecticides or herbicides, or as preservatives for foods and technical
CC   materials. The analogues are administered by injection, lavage, orally
CC   or topically, generally at 0.1-50 mg/kg. These analogues have a broader
CC   spectrum of activity than indolicidin and modification as compounds
CC   reduces their toxicity.
XX
SQ   Sequence   13 AA;


  Query Match             73.7%;  Score 73;  DB 19;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 0.00087;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 RRWPWWPWK 9
           |||||||||
Db       2 rrwpwwpwk 10


RESULT  12
AAY91775
ID   AAY91775 standard; Peptide; 13 AA.
XX
AC   AAY91775;
XX
DT   06-JUN-2000  (first entry)
XX
DE   Amino acid sequence of cationic peptide MBI 11CNR.
XX
KW   Cationic peptide; tumour; pharmaceutical composition; cancer; treatment;
KW   leukaemia; polyoxyalkylene-modified; APO; lymphoma; multiple myeloma;
KW   breast; lung; ovary; cervix; uterus; skin; prostate; liver; colon;
```

KW multidrug resistance.
XX
OS Synthetic.
XX
PN WO9965506-A2.
XX
PD 23-DEC-1999.
XX
PF 14-JUN-1999; 99WO-CA00552.
XX
PR 12-JUN-1998; 98US-0096541.
XX
PA (MICR-) MICROLOGIX BIOTECH INC.
XX
PI Friedland HD, Krieger TJ, Taylor R, Erfle D, Fraser JR, West MHP;
XX
DR WPI; 2000-223549/19.
XX
PT Novel pharmaceutical composition containing optionally activated
PT polyoxyalkylene-modified cationic peptides, useful for treating tumours
PT -
XX
PS Disclosure; Page 14; 94pp; English.
XX
CC This sequence represents a cationic peptide amino acid sequence, which
CC can be used in the pharmaceutical composition of the invention. The
CC invention relates to a pharmaceutical composition containing at least one
CC activated polyoxyalkylene (APO)-modified cationic peptide. The
CC modification of peptides with APO increases their activity against tumour
CC cells, including those with a multidrug resistant phenotype. The
CC pharmaceutical composition can be used to treat tumours, specifically
CC lymphoma, leukaemia, multiple myeloma, or tumours of breast, lung, ovary,
CC cervix, uterus, skin, prostate, liver and colon.
XX
SQ Sequence 13 AA;

Query Match 73.7%; Score 73; DB 21; Length 13;
Best Local Similarity 100.0%; Pred. No. 0.00087;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWK 9
||||||||| |
Db 2 rrwpwwpwk 10

RESULT 13
AAW66360
ID AAW66360 standard; peptide; 15 AA.
XX
AC AAW66360;
XX
DT 12-JAN-1999 (first entry)
XX
DE Indolicidin analogue MBI 11A9.
XX
KW Indolicidin analogue; resistance; cationic peptide; antibiotic;
KW bacterial infection; tolerance; antibacterial; microorganism;
KW bacteria; fungus; parasite; virus.
XX
OS Bos taurus.
OS Synthetic.
XX
PN WO9840401-A2.
XX
PD 17-SEP-1998.
XX
PF 10-MAR-1998; 98WO-CA00190.
XX
PR 25-FEB-1998; 98US-0030619.
PR 10-MAR-1997; 97US-0040649.
PR 20-AUG-1997; 97US-0915314.
PR 26-SEP-1997; 97US-0060099.
XX
PA (MICR-) MICROLOGIX BIOTECH INC.
XX
PI Fraser JR, McNicol PJ, West MHP;
XX
DR WPI; 1998-520800/44.
XX
PT New indolicidin peptide analogues - useful for, e.g. enhancing
PT activity of antibiotic or overcoming tolerance, acquired resistance
PT or inherent resistance of microorganisms
XX
PS Claim 1; Page 91; 105pp; English.
XX
CC The present sequence represents an indolicidin analogue. The present
CC invention describes compositions and methods for treating infection,
CC especially bacterial infections. The compositions and methods use
CC cationic peptides in combination with an antibiotic agent which are
CC then administered to a patient to enhance the activity of the antibiotic
CC agent, to overcome: (a) tolerance; (b) acquired resistance; and (c)
CC inherent resistance. The combinations of antibiotics and cationic
CC peptides can provide synergistic activity against a microorganism that
CC is tolerant, inherently resistant, or has acquired resistance to an
CC antibiotic agent. They can be used for killing e.g. bacteria, fungi,
CC parasites and viruses.
XX
SQ Sequence 15 AA;

Query Match 71.2%; Score 70.5; DB 19; Length 15;
Best Local Similarity 90.0%; Pred. No. 0.0021;
Matches 9; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 2 RWPWWPWKWP 11
||||||| ||
Db 3 rwpwwpw-wp 11

RESULT 14
AAY91784
ID AAY91784 standard; Peptide; 15 AA.
XX
AC AAY91784;
XX
DT 06-JUN-2000 (first entry)
XX
DE Amino acid sequence of cationic peptide MBI 11A9CN.
XX
KW Cationic peptide; tumour; pharmaceutical composition; cancer; treatment;
KW leukaemia; polyoxyalkylene-modified; APO; lymphoma; multiple myeloma;
KW breast; lung; ovary; cervix; uterus; skin; prostate; liver; colon;
KW multidrug resistance.
XX
OS Synthetic.
XX
PN WO9965506-A2.
XX
PD 23-DEC-1999.
XX
PF 14-JUN-1999; 99WO-CA00552.
XX
PR 12-JUN-1998; 98US-0096541.
XX
PA (MICR-) MICROLOGIX BIOTECH INC.
XX
PI Friedland HD, Krieger TJ, Taylor R, Erfle D, Fraser JR, West MHP;
XX
DR WPI; 2000-223549/19.
XX
PT Novel pharmaceutical composition containing optionally activated
PT polyoxyalkylene-modified cationic peptides, useful for treating tumours
PT -
XX
PS Claim 1; Page 14; 94pp; English.

XX
CC This sequence represents a cationic peptide amino acid sequence, which
CC can be used in the pharmaceutical composition of the invention. The
CC invention relates to a pharmaceutical composition containing at least one
CC activated polyoxyalkylene (APO)-modified cationic peptide. The
CC modification of peptides with APO increases their activity against tumour
CC cells, including those with a multidrug resistant phenotype. The
CC pharmaceutical composition can be used to treat tumours, specifically
CC lymphoma, leukaemia, multiple myeloma, or tumours of breast, lung, ovary,
CC cervix, uterus, skin, prostate, liver and colon.
XX
SQ Sequence 15 AA;

Query Match 71.2%; Score 70.5; DB 21; Length 15;
Best Local Similarity 90.0%; Pred. No. 0.0021;
Matches 9; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 2 RWPWWPWKWP 11
||||||| ||
Db 3 rwpwwpw-wp 11

RESULT 15
AAY24566
ID AAY24566 standard; peptide; 12 AA.
XX
AC AAY24566;
XX
DT 18-AUG-1999 (first entry)
XX
DE Indolicidin analogue #18.
XX
KW Indolicidin; bacterial infection; photo-oxidised solubiliser;
KW antimicrobial; antibiotic; antiarrythmic; surface disinfectant;
KW additive; shampoo; soap; insecticide; herbicide; preservative;
KW food; technical material.
XX
OS Synthetic.
XX
PN WO9807745-A2.
XX
PD 26-FEB-1998.
XX
PF 21-AUG-1997; 97WO-US14779.
XX
PR 13-JAN-1997; 97US-0034949.
PR 21-AUG-1996; 96US-0024754.
XX
PA (MICR-) MICROLOGIX BIOTECH INC.
XX
PI Erfle D, Fraser JR, Krieger TJ, Taylor R, West MH;
XX
DR WPI; 1998-169090/15.
XX
PT New indolicidin analogues with antimicrobial activity and related
PT nucleic acid - vectors, transformed cells and antibodies, also
PT conjugates with polyoxyalkylene glycol and fatty acid to reduce
PT toxicity, useful therapeutically, as disinfectants etc.
XX
PS Claim 12; Page 89; 129pp; English.
XX
CC AAY24549 to AAY24615 represent indolicidin analogues of formulae
CC (I)-(VIII) containing up to 25 amino acids (aa): RXZXXZXB (I), BXZXXZXB
CC (II), BBBXZXXZXB (III), BXZXXZXBBBn(AA)nMILBBAGS (IV), BXZXXZXBB(AA)nM
CC (V), LBBnXZnXXZnXRK (VI), LKnXZXXZXRRK (VII) and BBXZXXZXBBB (VIII).
CC Where Z = P or V; X = hydrophobic residue, preferably W; B = basic aa,
CC preferably R or K; AA = any aa; n = 0 or 1; in (II), at least 1 Z = V;
CC in (VIII) at least 2 X = F or Y. The analogues are used to treat
CC infections caused by bacteria (Gram positive or negative, or anaerobic);
CC fungi (yeast or moulds); parasites (protozoa, nematodes, cestodes or
CC trematodes) or viruses. Typical of very many pathogens that can be
CC controlled are Leishmania, Trypanosoma, Ascaris lumbricoides, Fasciola
CC hepatica, Klebsiella pneumoniae, Bordetella pertussis, Staphylococcus
CC aureus, Listeria, Clostridium, rotavirus and papilloma virus. Compounds
CC derived from the analogues may be used similarly; the compounds may
CC also be prepared from antibiotics or antiarrythmic agents. The analogues
CC may be used therapeutically or to coat medical devices; also they are
CC useful as surface disinfectants, as additives to shampoo or soaps, as
CC insecticides or herbicides, or as preservatives for foods and technical
CC materials. The analogues are administered by injection, lavage, orally
CC or topically, generally at 0.1-50 mg/kg. These analogues have a broader
CC spectrum of activity than indolicidin and modification as compounds
CC reduces their toxicity.
XX
SQ Sequence 12 AA;

Query Match 70.7%; Score 70; DB 19; Length 12;
Best Local Similarity 88.9%; Pred. No. 0.002;
Matches 8; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RRWPWWPWPWK 9
||||||||:
Db 3 rrwpwwpwpr 11

Search completed: January 30, 2002, 11:49:55
Job time: 94 sec